

Preliminary Amendment  
CA105US  
App. Ser. No. 10/054,343

25. Page 25, line 17, change each of two references to “month” to “bid period”.

Line 24, change “month” to “bid period”.

Line 25, change “month” to “bid period”.

26. Page 26, line 5, change “month” to “bid period”.

IN THE CLAIMS

Please amend the Claims as follows:

1. Claim 12, page 39, line 8, change “month” to “bid period”.

Line 9, change “month” to “bid period”.

2. Claim 13, page 39, line 21, change “month” to “bid period”.

Line 22, change “month” to “bid period”.

3. Claim 38, page 45, line 24, change “month” to “bid period”.

Line 25, change “month” to “bid period”.

4. Claim 39, page 46, line 1, change “month” to “bid period”.

Line 2, change “month” to “bid period”.

Please add the following Claims:

--40. A system for rapidly generating multiple alternative pilot training plans for all pilots in a entire airline, which comprises:

    a user interface receiving user requests and input data from a user, and providing status messages for informing said user;

    an optimizer system in electrical communication with said user interface for generating said status messages, and in response to receiving said user requests and said input data, rapidly generating said multiple alternative pilot training plans by creating variables and constraints, creating a mixed integer programming model from said variables and said constraints, and thereafter solving said mixed integer programming model; and

Preliminary Amendment  
CA105US  
App. Ser. No. 10/054,343

a database in electrical communication with said optimizer system, and receiving said user requests, said input data, said status messages, and said multiple alternative pilot training plans from said optimizer system for storage and access by said user.

--41. An optimizer engine for rapid generation of pilot training plans which receives pilot data and user requests from a database system, and which comprises:

means for operating upon said pilot data and user requests to build parameter lists, variable lists, and constraint lists;

means for building a mixed integer programming model from said parameter lists, said variable lists, and said constraint lists;

means for solving said mixed integer programming model to generate variable value solutions; and

means for generating multiple alternative pilot training plans from said variable value solutions.

--42. The optimizer engine of Claim 41, wherein parameters in said parameter lists are varied to determine those of said variable value solutions which are revenue enhancing.

--43. The optimizer engine of Claim 41, wherein said optimizer engine accommodates seamless integration into data processing environments.

--44. The optimizer engine of Claim 41, wherein said pilot training plans maximize pilot availability, optimize use of training resources, and track costs and events occurring in said pilot training plans.

--45. The optimizer engine of Claim 41, wherein said optimizer engine generates said alternative pilot training plans in less than one hour after receipt of said pilot data and user requests.

--46. The optimizer engine of Claim 41, wherein said means for solving generates and solves an LP relaxation of said mixed integer programming model to determine feasibility before solving said mixed integer programming model.

--47. The optimizer engine of Claim 46, wherein said means for solving calculates costs for said LP relaxation and generates therefrom modified objective function cost factors based upon block hour and dollar costs of said mixed integer programming model.

--48. The optimizer engine of Claim 42, wherein said parameters are comprised of sub-base openings, sub-base closings, vacation cancellations, levels of importance, costs, capacity, excesses, shortages, and training resource availability.